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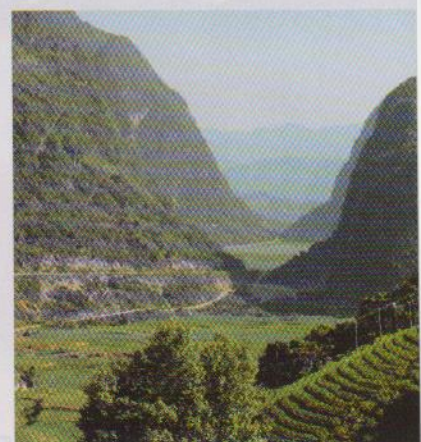
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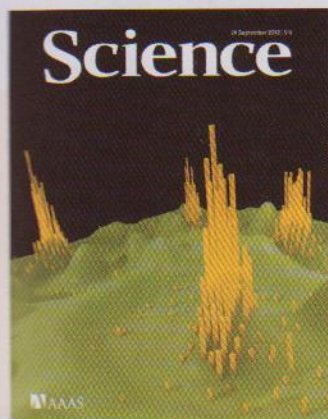
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COVER

Overlay of a scanning tunneling microscope image of four iron-copper dimers adsorbed on a surface (green) with a snapshot of their electron-spin dynamics (yellow spikes). On page 1628, Loth *et al.* describe the measurement of electron spin relaxation times of individual atoms extracted from a time series of tunneling current measurements with nanosecond time resolution.

Image: Sebastian Loth, IBM Research/Almaden

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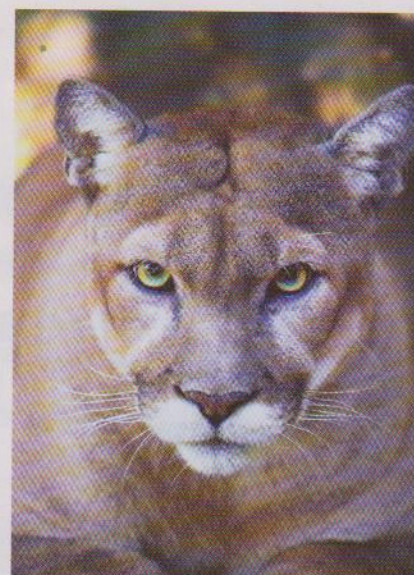
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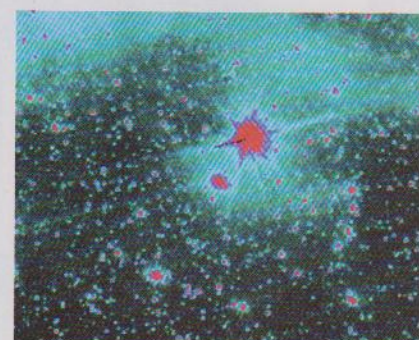
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The neurotransmitter GABA is tonically released from cells through an anion channel with an unusually large pore.

10.1126/science.1184334

Intestinal Stem Cell Replacement Follows a Pattern of Neutral Drift

C. Lopez-Garcia et al.

Intestinal stem cells form an equipotent population where loss of a stem cell is compensated by multiplication of a neighbor.

10.1126/science.1196236

Lineage Relationship Analysis of RORYt⁺ Innate Lymphoid Cells

S. Sawa et al.

Immune cells develop to preempt intestinal colonization by microbial symbionts.

10.1126/science.1194597

Particle Acceleration on Megaparsec Scales in a Merging Galaxy Cluster

R. J. van Weeren et al.

Observations show that shocks within the intracluster medium are capable of producing extremely energetic cosmic rays.

10.1126/science.1194293

Magnitude of the 2010 Gulf of Mexico Oil Leak

E. J. Crone and M. Tolstoy

Modeling videos suggest that around 4.4 million barrels of oil escaped from the broken *Deepwater Horizon* well.

10.1126/science.1195840

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Highlights From Our Daily News Coverage

Tuning In to Highest Energy Cosmic Rays

A chance observation suggests that radio waves reflected off Antarctic ice could be used to track particles from space.

Metal Smasher Makes Aluminum as Strong as Steel

A new technique could produce a cheap alternative to titanium for aircraft and body armor.

Is Narcissism Good for Business?

Narcissists' ideas aren't any more creative, but narcissists help get things done.

SCIENCE SIGNALING

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RESEARCH ARTICLE: Synthetic Lethal Screen of an EGFR-Centered Network to Improve Targeted Therapies

I. Astsaturov et al.

A targeted RNAi screen reveals potential targets for combination approaches to cancer treatment.

RESEARCH ARTICLE: Regulation of Ras Localization by Acylation Enables a Mode of Intracellular Signal Propagation

A. Lorentzen et al.

Active Ras is relayed between subcellular compartments by the acylation cycle.

PERSPECTIVE: The Myelin Brake—When Enough Is Enough

W. B. Macklin

The lipid phosphatase PTEN and the scaffold protein Dlg1 restrict myelination in the peripheral nervous system.

NETWORK: Peptidome

Deposit experimental mass spectrometry data into a public repository; in Technical Information.

NETWORK: DNASU Plasmid Repository

Browse and contribute to a repository that archives and distributes plasmids; in Technical Information.

SCIENCE CAREERS

www.sciencereers.org/career_magazine

Free Career Resources for Scientists

Making Each Other More Human

V. Venkatraman

The 50-year partnership of Don and Ada Olins is based on good communication and a shared passion for chromatin structure.

Don't Worry, I'm (Un)Professional:

A Guide to Your Laboratory Colleagues

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Our Experimental Error columnist asks, "Who are the people in your fume hood?"

SCIENCE TRANSLATIONAL MEDICINE

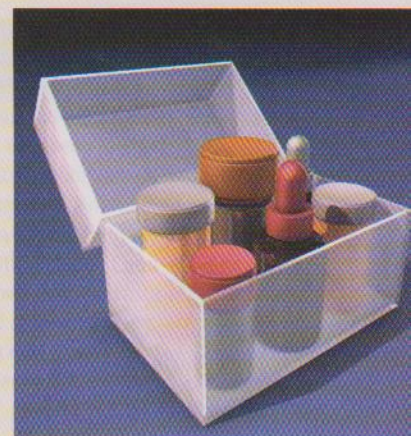
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Integrating Medicine and Science

REVIEW: Long Synthetic Peptides for the Production of Vaccines and Drugs—A Technological Platform Coming of Age

G. Corradin et al.

Improved methods for producing long synthetic peptides, together with bioinformatics approaches, offer promise for developing clinically relevant products.



SCIENCE SIGNALING

Rational combination therapy.

RESEARCH ARTICLE: A Naturally Occurring Human Minidysferlin Protein Repairs Sarcolemmal Lesions in a Mouse Model of Dysferlinopathy

M. Krahn et al.

Gene therapy by mini-gene transfer may be useful for treating patients with certain progressive muscular dystrophies.

SCIENCE PODCAST

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Download the 24 September *Science* Podcast to hear about measuring relativity with optical clocks, relocating species threatened by climate change, funding stem cell research in the U.S., and more.

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